

CLAIMS:

1. A method for inspecting an integrated circuit, the circuit comprising a plurality of sub-circuits and the method comprising a determination of a first supply current in a supply line of a first sub-circuit of the sub-circuits, characterised in that a first voltage over a segment of the supply line is measured, while all sub-circuits are operational, and that
- 5 the determination of the first supply current is carried out on the basis of the first voltage and the resistance of the segment of the supply line.
2. A method according to Claim 1; comprising a determination of a second supply current in a supply line of a second sub-circuit of the sub-circuits, characterised in that a second voltage is measured over a segment of the supply line of the second-sub-circuit
- 10 and that the first and the second voltage are measured by successively connecting a single voltage-measuring device to the segments of the first supply line and the second supply line respectively.
3. A method according to Claim 2, characterised in that output of the respective measurements are fed out of the integrated circuit.
- 15 4. A method according to any one of the Claims 1 to 3, characterised in that at least one of the voltages is measured by a differential pair of transistors.
5. A method according to Claim 4, characterised in that the at least one of the voltages is measured in the following steps:
- connecting a first input of the differential pair of transistors to a first side of the

20 particular segment, connecting a second input of the differential pair of transistors to a second side of the particular segment and making a first measurement,  - connecting the first input of the differential pair of transistors to the second side of the particular segment, connecting the second input of the differential pair of transistors to the first side of the particular segment and making a second measurement,

25 - combining the first measurement and the second measurement to a result for use as the measured voltage over the particular segment.

6. A method according to any one of the Claims 1 to 5, characterised in that the supply current is compared with a for that particular supply current determined range and that the circuit is rejected if the supply current falls outside the range.

7. A method according to any one of the Claims 1 to 5, comprising the determination of at least two supply currents for respective sub-circuits, characterised in that a current ratio is determined between a first one and a second one of the two supply currents and that the integrated circuit is rejected if the current ratio falls outside a for the particular current ratio determined range.
8. A method for inspecting an integrated circuit, the method comprising a determination of a current in a signal line in the circuit, characterised in that a voltage over a segment of the signal line is measured and that the determination of the current is carried out on the basis of the voltage and the resistance of the segment of the signal line.
9. An integrated circuit comprising a plurality of sub-circuits and comprising a current-measuring device for measuring a supply current in a supply line of at least one of the sub-circuits, characterised in that the current-measuring device comprises a voltage-measuring device for measuring a voltage over a segment of the supply line.
10. An integrated circuit according to Claim 9, characterised in that the current-measuring device comprises connection means for successively connecting the voltage-measuring device to the segment of the supply line and to a segment of a supply line of a further one of the sub-circuits.
11. An integrated circuit according to Claim 9 or 10, which circuit comprises a detection and/or diagnostic sub-circuit, characterised in that the detection and/or diagnostic sub-circuit is arranged to process the result of the current-measuring device and to feed a result of the processing outside the circuit.
12. An integrated circuit according to any one of the Claims 9 to 11, characterised in that the voltage-measuring device comprises a differential pair of transistors.
13. An integrated circuit comprising a current-measuring device for measuring a current in a signal line in the circuit, characterised in that the current-measuring device comprises a voltage-measuring device for measuring a voltage over a segment of the signal line.

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